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## New role for CIA sub-snatcher?

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She's probably the most expensive "operative" the Central Intelligence Agency (CIA) ever had. Certainly she's the biggest and strongest...

She's the Hughes Glomar Explorer, famed for scraping a Soviet submarine — or at least part of it — off the bottom of the Pacific Ocean for the CIA in 1974.

Today the Explorer floats quietly in Suisun Bay, northeast of San Francisco, like a huge mother, lurching over a brood of much smaller vessels — mothballed US Navy warships of World War II vintage.

But unlike the scores of cruisers and destroyers huddled together just a mile or so from her lonely anchorage, the Glomar Explorer is almost certain to see action again.

If present planning comes to fruition sometime in 1984, the only ship capable of lifting another from the ocean deep and storing it in her hold will become the platform and floating research center for the National Science Foundation's Ocean Margin Drilling Program.

The program will involve drilling at some 20 sites in the Atlantic and Pacific oceans, the Caribbean Sea, the Gulf of Mexico, and the Weddell Sea off Antarctica.

Joint Oceanographic Institutions Inc. (JOI), a nonprofit consortium of 10 US oceanographic institutions, will coordinate the research program. The oceanographic consortium was formed in 1964 and since 1968 has provided guidance and support for the Deep-Sea Drilling Project — a program that utilizes the drill ship Glomar Challenger and has produced "remarkable scientific achievements," according to the JOI.

The Deep-Sea Drilling Project provided "a framework for understanding the shape and structure of the continents and ocean basins, the location of earthquake belts, the nature of volcanic systems, the distribution of petroleum and other mineral deposits, and the timing and causes of climatic change," says JOI.

The new drilling program will carry that research into deeper waters and drill deeper into Earth's crust. It will, as the term "ocean margin" indicates, involve drilling deep into the oceanic crust in "the slope and rise province between the continental shelf and the deep sea."

Glomar Challenger was worked in a maximum water depth of 12,796 feet and the deepest hole it has drilled in the ocean floor extended 5,709 feet. The Explorer, after being refitted for drilling, will be capable of working in water depths up to 13,200 feet and drilling to 20,000 feet below the ocean floor.

Scientists involved say the ocean-margin program is expected to fill a large gap in geologic and climatological knowledge; extend understanding of the movement of Earth's tectonic plates — which affect volcanic action and continental drift; and, as stated in a 1980 JOI outline of the program, provide "specific information of direct benefit in developing the scientific basis for extension of the search for oil and gas in regions adjacent to the United States."

Santa Fe Engineering Services Company of Orange, Calif., was contracted by the National Science Foundation to provide "systems support" for the ocean-margin project. On a recent day, Ralph P. Jacobs, a senior design engineer with Santa Fe and manager of liaison activities for the program, guided some 30 scientists and oil company representative, plus one reporter, on an exhaustive and exhausting tour of the huge Glomar Explorer.

The makeup of the tour group is significant, for it symbolizes a unique feature of the ocean-margin project. This is said to be the first time that the scientific community — represented by the National Science Foundation and the JOI — has teamed up with private industry — represented by some dozen American oil companies who may soon be joined by more — to support such a project with both funds and personnel.

The companies are buying "shares" in the venture, which is tentatively funded at \$6 million for fiscal 1982, that is expected to go to \$12 million for the second year, and to rise substantially in subsequent years. Government and industry are to share the cost equally.

American industry may have first discovered that it could manufacture gigantic machines that would perform as well as small ones when the Panama Canal was built. The late Howard Hughes made gigantism a symbol of his industrial empire, and the Hughes Glomar Explorer is the most recent example.

Although three huge derricks, or "risers," on its deck were truncated so the ship could pass under bridges on the way to Suisun Bay, the Explorer is massively impressive. At 620 feet a little shorter than a World War II battleship, but wider at 115 feet, the Explorer has a great "well" amidships that is 200 long and 100-plus feet wide. It was made to accommodate the Soviet submarine. For the purposes of the ocean-margin program that huge pool will be reduced considerably.

The ship has roomy quarters for captain and crew; two bridges, one for sailing and one for "station-keeping"; five giant diesel engines, plus a set of power generators that could light up a good-sized city; a computer system for controlling work in the deep, and plenty of room for several teams of scientists to set up laboratories.

According to design engineer Jacobs, the Explorer can provide an extremely stable platform for working on the ocean surface. In fact, it is the most stable floating drilling platform ever built.

The ship was built for the CIA to perform one mission: Lift that Soviet submarine from the floor of the Pacific some 750 miles north of Oahu, Hawaii. Launched at Chester, Pa., in 1972, the Explorer in July 1974 succeeded in salvaging what is reported to have been one-third of the Russian sub. Various accounts of the mission have been written, though exactly what was recovered is not wholly known. It is believed, however, that code machines and nuclear devices sought were not recovered.

Mothballed in 1976, the Explorer was reactivated in 1978 and loaned to the Marine Development Company of Newport News, Va., for an ocean-mining project — believed to have involved recovering manganese nodules — that apparently did not pan out. The ship subsequently was turned over to the US Navy and again mothballed. It is maintained in what Jacobs describes as "excellent" condition.

Reported to have cost the CIA more than \$200 million, the Explorer could not be duplicated for anything near that price today, says Jacobs. It will be made available without cost for the ocean-margin project, although some millions must be spent to outfit the ship for its new role.

The final decision to go ahead with the Glomar Explorer refitting and the ocean-margin project itself has not been made, but the researchers who expect to be associated with the project are clearly excited and ready to get started. Knowing that they will have to wait two or three years before actually finding themselves at sea with all their gear doesn't daunt them. After all, they are accustomed to dealing with the work of millenniums.